CLAIMS:

1. A power supply apparatus comprising:

an electrochemical device configured to store electrical energy;

a first interface coupled with the electrochemical device and adapted to couple with a supply configured to provide electrical energy and a first load configured to receive electrical energy; and

charge circuitry coupled intermediate the first interface and the electrochemical device, wherein the charge circuitry is configured to monitor a quantity of electrical energy supplied from the supply to the first load and to control a supply of electrical energy to the electrochemical device responsive to the monitoring and to charge the electrochemical device.

2. The apparatus of claim 1 further comprising a second interface coupled with the electrochemical device and adapted to provide electrical energy from the electrochemical device to a second load, wherein the first load has a power rating greater than a power rating of the second load.

3. The apparatus of claim 2 wherein the first load has a power rating in excess of 20 watts and the second load has a power rating less than 20 watts.

4. The apparatus of claim 1 wherein the electrochemical device comprises a lithium cell having a lithium-mixed metal electrode.

5. The apparatus of claim 1 further comprising a boost converter coupled intermediate the electrochemical device and the first interface and configured to receive electrical energy from the electrochemical device, to increase a voltage of the electrical energy received from the electrochemical device, and to provide the electrical energy of the increased voltage to the first interface for application to the first load.

6. The apparatus of claim 1 further comprising:

a second interface; and

a step-down converter coupled intermediate the electrochemical device and the second interface and configured to receive electrical energy from the electrochemical device, to decrease a voltage of the electrical energy received from the electrochemical device, and to provide the electrical energy of the decreased voltage to the second interface for application to a second load coupled with the second interface.

7. A power supply apparatus comprising:

an electrochemical device configured to store electrical energy;

a first interface coupled with the electrochemical device and adapted to couple with a supply configured to provide electrical energy and a first load configured to receive electrical energy; and

a boost converter coupled intermediate the electrochemical device and the first interface and configured to receive electrical energy from the electrochemical device, to operate in an enabled mode of operation to increase a voltage of the electrical energy received from the electrochemical device and to provide the electrical energy of the increased voltage to the first interface for application to the first load, to detect a presence of the supply, and to operate in a disabled mode of operation wherein the boost converter ceases provision of the electrical energy to the first interface responsive to the detection of the presence of the supply.

8. The apparatus of claim 7 further comprising a connector adapted to couple with the supply and the first load, and wherein the connector is configured to removably electrically couple with the first interface and the boost converter is configured to operate in the enabled mode of operation responsive to the coupling of the connector and the first interface.

9. The apparatus of claim 7 further comprising charge circuitry coupled intermediate the first interface and the electrochemical device.

10. The apparatus of claim 9 wherein the charge circuitry is configured to monitor a quantity of electrical energy supplied from the supply to the first load and to control a quantity of electrical energy applied to the electrochemical device to charge the electrochemical device responsive to the monitoring.

11. The apparatus of claim 7 wherein the electrochemical device comprises a lithium cell having a lithium-mixed metal electrode.

12. The apparatus of claim 7 further comprising:

a second interface; and

a step-down converter coupled intermediate the electrochemical device and the second interface and configured to receive electrical energy from the electrochemical device, to decrease a voltage of the electrical energy received from the electrochemical device, and to provide the electrical energy of the decreased voltage to the second interface for application to a second load coupled with the second interface.

13. A power supply apparatus comprising:

electrical energy storage circuitry comprising a lithium cell having a lithium-mixed metal electrode;

an interface coupled with the storage circuitry and adapted to couple with a supply configured to provide electrical energy and a load configured to receive electrical energy; and

circuitry coupled intermediate the interface and the electrochemical device, wherein the circuitry is configured to apply electrical energy from the supply to the storage circuitry to charge the storage circuitry and to apply electrical energy from the storage circuitry to the interface for application to the load.

14. The apparatus of claim 13 wherein the circuitry comprises a converter configured to receive electrical energy having a variable voltage from the storage circuitry and to apply electrical energy from the storage circuitry to the interface having a substantially constant voltage.

15. The apparatus of claim 14 wherein the converter comprises a boost converter.

16. The apparatus of claim 14 wherein the converter comprises a step-down converter.

17. The apparatus of claim 14 further comprising a connector adapted to couple with the supply and the load, and wherein the connector is configured to removably electrically couple with the interface and to control the converter to provide the electrical energy of the substantially constant voltage.

18. The apparatus of claim 13 further comprising:

another interface; and

a step-down converter coupled intermediate the storage circuitry and the another interface and configured to receive electrical energy from the storage circuitry, to decrease a voltage of the electrical energy received from the storage circuitry, and to provide the electrical energy of the decreased voltage to the another interface for application to another load coupled with the another interface.

19. A method of supplying electrical energy comprising:

first applying electrical energy from a supply to a load;

second applying electrical energy from an electrochemical device to the load;

charging the electrochemical device using electrical energy from the supply;

monitoring the first applying; and

controlling the charging responsive to the monitoring.

20. The method of claim 19 further comprising third applying electrical energy from the electrochemical device during the second applying to another load having a power rating less than a power rating of the load.

21. The method of claim 19 further comprising adjusting at least one electrical characteristic of the electrical energy from the electrochemical device before the second applying.

22. The method of claim 21 wherein the first applying and the second applying individually comprise applying using a connector, and further comprising controlling the adjusting using the connector.

23. The method of claim 19 further comprising providing the electrochemical device comprising a lithium cell having a lithium-mixed metal electrode.

24. A method of supplying electrical energy comprising:

providing electrical energy using an electrochemical device;

adjusting an electrical characteristic of the electrical energy from the electrochemical device;

providing the electrical energy from the electrochemical device to a load after the adjusting;

detecting the presence of a supply; and

ceasing the providing of the electrical energy from the electrochemical device to the load responsive to the detecting.

25. The method of claim 24 further comprising:

selecting one of a plurality of removable connections corresponding to the load;

coupling the selected removable connection intermediate the electrochemical device and the load, and wherein the providing the electrical energy to the load comprises using the removable connection after the coupling; and

controlling the adjusting using the connection.

26. The method of claim 24 further comprising:

coupling a removable connection intermediate the electrochemical device and the load, and wherein the providing the electrical energy to the load comprises using the removable connection after the coupling and wherein the adjusting comprises adjusting using a converter; and

enabling the converter responsive to the coupling.

27. The method of claim 26 wherein the ceasing comprises disabling the converter.

28. The method of claim 26 wherein the ceasing comprises opening a switch intermediate the converter and the removable connection.

29. The method of claim 24 further comprising providing the electrochemical device comprising a lithium cell having a lithium-mixed metal electrode.

30. The method of claim 24 wherein the adjusting comprises increasing a voltage of the electrical energy from the electrochemical device, and further comprising:

decreasing a voltage of electrical energy from the electrochemical device; and

providing the electrical energy having the decreased voltage to another load.

31. A method of supplying electrical energy comprising:

providing a battery comprising a plurality of electrochemical devices individually comprising a lithium cell having a lithium-mixed metal electrode;

coupling a supply with the lithium cells;

coupling the lithium cells with a load;

charging the lithium cells using the supply;

disconnecting the supply; and

applying electrical energy from the lithium cells to the load when the supply is disconnected from the load.

32. The method of claim 31 wherein the coupling the supply comprises coupling the supply with the load, and further comprising applying electrical energy from the supply to the load during the coupling of the supply and the load.

33. The method of claim 31 further comprising increasing a voltage of the electrical energy from the lithium cells, and wherein the applying comprises applying after the increasing.

34. The method of claim 33 wherein the increasing comprises increasing using a converter, and wherein the coupling the supply comprises coupling the supply with the load, and further comprising disabling the converter during the coupling of the supply with the load.

35. The method of claim 33 further comprising:

decreasing a voltage of electrical energy from the lithium cells; and

applying the electrical energy having the decreased voltage to another load.